

December 2016 Climate Review for Puerto Rico and U.S. Virgin Islands.

Summary

A seasonable weather pattern with no significant weather features was observed across the islands throughout the month. Quick passing showers were noted at times mainly across windward areas with limited shower activity observed in the afternoon across western Puerto Rico. A persistent high pressure pattern across the Atlantic resulted in a stronger than normal flow across the region. Therefore, several breezy to windy days along with frequent trade wind shower activity focused across the eastern half of PR and the USVI were reported.

Based on the Cooperative Observer Network Data (COOP), 95 percent of the normal rainfall was observed across Puerto Rico. Preliminarily, an average rainfall total of 3.85 inches was measured, which is 0.21 inches below normal (Table 1). Across the U.S. Virgin Islands, 64 and 81 percent of the normal rainfall was observed across Saint Thomas and Saint Croix, respectively (island-wide) (Table 1). The mean temperature for Puerto Rico was 77°F, which is approximately 2.4°F warmer than the 30-year average from the National Centers for Environmental Information (NCEI). Temperatures across Puerto Rico ranged from 91°F in Aguirre on the 1st of December, to 61 °F in Ponce on the 12th of month. The mean temperature at Cyril E. King Airport in St. Thomas and Henry E. Rohlsen in St Croix was 80.7 and 79.8°F, which is 1.2 and 0.8 °F above normal, respectively.

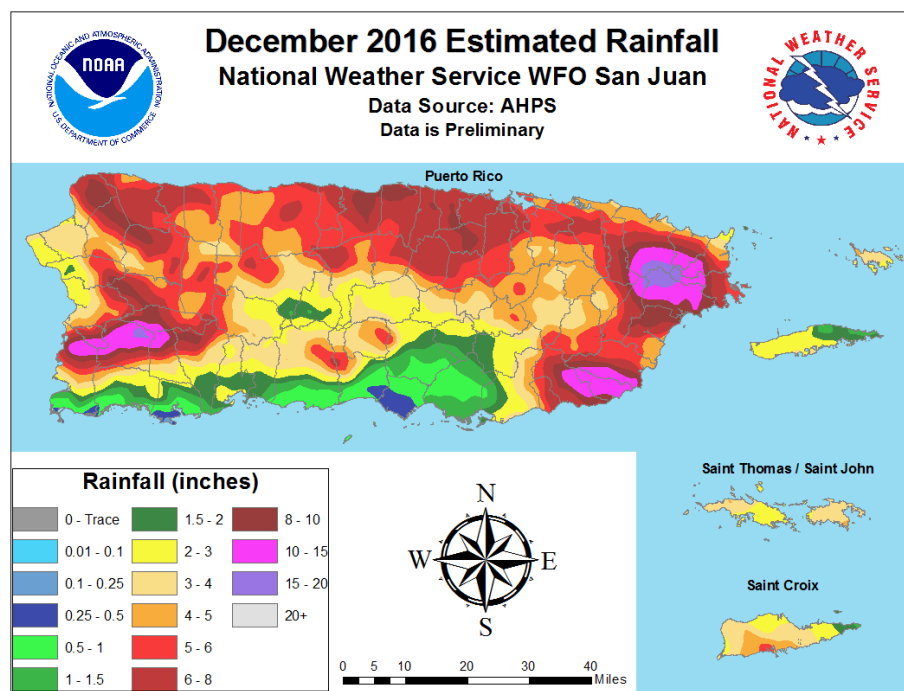
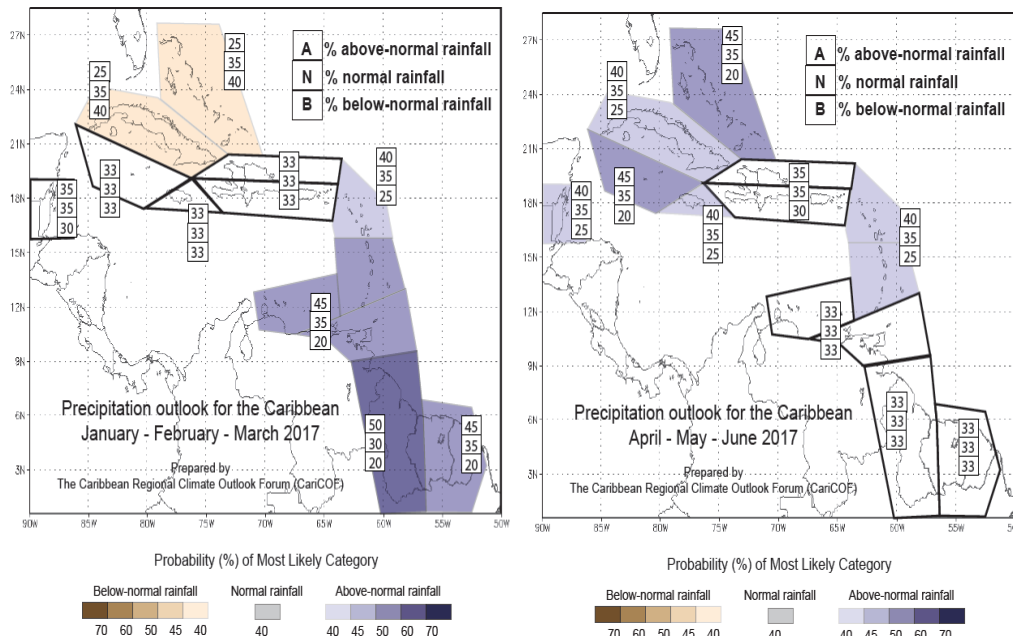


Figure 1. Rainfall Totals based on AHPS

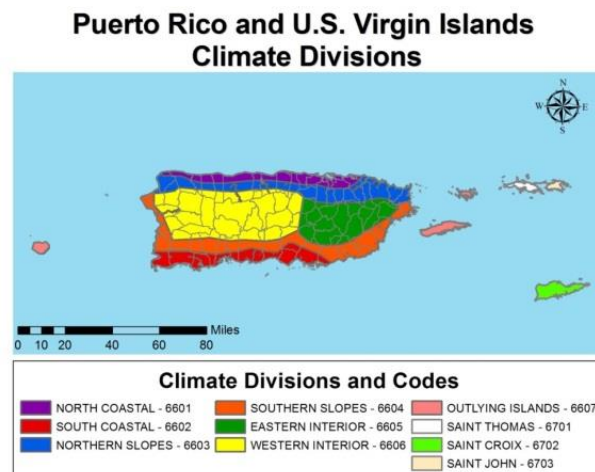
Looking Ahead

La Niña conditions are present, with a transition to ENSO – neutral favored during January – March 2017. In terms of SSTs, Tropical North Atlantic SSTs tend to cool anomalously towards the end of La Niña, and are currently slightly above average throughout the Caribbean Islands. Small positive SST anomalies are expected to persist throughout the region and portions of the Tropical North Atlantic during Jan-Feb-Mar, but mostly fade by Apr-May-Jun. La Niña tends to shift rainfall chances for Jan-Feb-Mar to above-normal in the southern-most islands of the Caribbean, and below-normal in the Bahamas and Cuba. However, with the forecast ENSO conditions suggesting a weak La Niña at most, its effect on rainfall may not be dominant.



More Info: <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

Average Rainfall Accumulation per climate zones based on COOP



	North Coastal	South Coastal	Northern Slopes	Southern Slopes	Eastern Interior	Western Interior	All PR	St Croix	St Thomas
Observed (Dec)	5.72	0.86	2.11	3.02	4.95	5.29	3.85	2.41	2.38
Normal (Dec)	5.48	1.79	5.39	2.34	6.21	3.16	4.06	2.97	3.74
% PON (Dec)	104	48	39	129	80	167	95	81	64
Accumulated YTD	72.39	43.26	66.36	55.22	90.14	95.93	74.21	45.79	34.33
Normal accumulation YTD	66.20	40.68	65.48	54.33	81.68	66.58	62.50	39.58	43.56
% PON accumulated YTD	109	106	101	102	110	144	119	116	79

Table 1. Dec 2016 and 2016 Rainfall (inches). Percent of Normal (PON).

Historical Rainfall and Temperature

	Puerto Rico		San Juan Area		IST		ISX	
1	1997	1.10	1963	0.68	1963	0.63	2010	0.37
2	1989	1.37	1925	0.98	1956	0.76	2008	0.75
3	1985	1.42	1997	1.02	2000	1.12	1963	0.79

Table 2. Driest Decembers on record (inches).

	Puerto Rico		San Juan Area		IST		ISX	
1	1960	11.79	1981	16.81	1960	9.87	1960	14.03
2	1981	11.70	1910	15.40	1957	7.45	1975	9.07
3	1970	8.56	1922	12.64	2013	7.34	2001	7.86

Table 3. Wettest Decembers on record (inches).

	Puerto Rico**		San Juan Area		IST		ISX	
1	2015	77.4	2016	80.8	1994	81.8	1998	81.3
2	2009	76.7	1980	80.7	1993	81.6	1987	81.0
3	2006	76.6	2013	80.2	1992	81.1	1993	80.8

Table 4. Warmest Decembers on record (°F).

	Puerto Rico**		San Juan Area		IST		ISX	
1	1940	67.3	1917	74.7	2010	75.7	1964	75.8
2	1941	68.2	1916	74.8	1964	76.1	2010	75.9
3	1975	72.4	1909	74.8	1954	76.2	1952	76.4

Table 5. Coolest Decembers on record (°F).

** Following years are not included due to lack of data: 1955, 1956, 1957, 1959, 1967, 1978, 1979**

	Puerto Rico	San Juan Area	IST	ISX
Temperature	74.6 °F	78.7°F	79.5°F	79.0°F
Rainfall	4.13"	5.02"	2.96"	2.97"

Table 6. Normal Values for December

Monthly and Seasonal Highlights for Primary Climatological Data Sites.

	December
San Juan Area	warmest 80.8 °F
IST	---
ISX	---

Table 7. Monthly Highlights

Additional Highlights Based on COOP Data

Wettest Days

Station	Inches (inches)	Date
PALMA SOLA	1.87	12/20/2016
MOROVIS 1 N	1.68	12/20/2016
PALMAREJO VEGA BAJA	1.58	12/20/2016

Highest Maximum Temperatures

Station	Temperature (°F)	Date
AGUIRRE	91	12/1/2016
LAJAS SUBSTN	91	12/11/2016
GUAYAMA 2E	89	12/17/2016

Lowest Minimum Temperatures

Station	Temperature (°F)	Date
PONCE 4 E	61	12/12/2016
LAJAS SUBSTN	62	12/14/2016
AIBONITO 1 S	63	12/31/2016

Data is preliminary and has not undergone final quality control by the National Centers for Environmental Information / NCEI/. Therefore, this data is subject to revision. Report based on data received until December 31st 2016.

Puerto Rico Climate Record Period: 1940 to 2016

San Juan Metro Area Climate Record Period: 1898 to 2016 (Primary climatological site)

Cyril E. King Airport/St Thomas Climate Record Period: 1953 to 2016 (Primary climatological site)

Henry E. Rohlsen Airport/St Croix Climate Record Period: 1951 to 2016 (Primary climatological site)